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A new genus and three new species of the family Theridiidae (Arachnida: Araneae) from North Borneo

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Abstract — A new genus, *Deelemanella*, and three new species, *D. borneo, Molione christae* and *M. kinabalu*, belonging to the family Theridiidae are described from North Borneo.

Key words — *Deelemanella, Molione*, new genus, new species, Theridiidae, North Borneo

Through the kindness of Dr. Christa L. Deeleman-Reinhold, Ossendrecht, the Netherlands, I had an opportunity to study some theridiid spiders collected from North Borneo. In this paper, I wish to describe a new genus and three new species.

One of the three species is a member of the new genus *Deelemanella* belonging to Argyrodinae, and the other two are member of the known genus *Molione* Thorell 1892 of the subfamily Theridiinae. *Deelemanella* is characterized by male carapace with a dorso-anterior projection, and flat abdomen with some pairs of dorsal projections. *Molione*, under which three species has been recorded, is characterized by abdomen with extremely sclerotized epigastric area and a sclerotized ring around spinnerets; although three known species have dorsal spine-like projections on the abdomen, the present two new species lack such projections.

All the specimens used in this paper are deposited in the collection of the Department of Entomology, National Museum of Natural History Naturalis, Leiden, the Netherlands.

For the descriptions, following abbreviations are used in this paper: ALE, anterior lateral eye; AME, anterior median eye; AME-ALE, between AME and ALE; AME-AME, between AMEs; AW, anterior width; L, length; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye; PME-PLE, between PME and PLE; PME-PME, between PMEs; PW, posterior width.

Deelemanella new genus

Diagnosis. The present new genus resembles *Argyrodes* Simon 1864, but is distinguished from the latter by male carapace with only one projection intervening median eyes and flat abdomen with many dorsal projections.

This genus consists of only the type species and belongs to the subfamily Argyrodinae, which formerly consisted of four genera, *Spheropistha* Yaginuma 1957, *Argyrodes* Simon 1864, *Rhomphaea* L. Koch 1872 and *Ariamnes* Thorell 1869 (Yoshida 2001, 2003). Exline & Levi (1962) treated *Rhomphaea* and *Ariamnes* as species groups of *Argyrodes* (s. lat.) respectively, and moreover divided *Argyrodes* (s. str.) into four species groups. This new genus does not belong to any of the species groups designated by them.

Description. Male carapace with a dorso-anterior projection intervening median eyes. Abdomen flat and oblong, with paired dorsal nipple-like projections. Epigynum swollen semi-globularly with a median opening. Male palpus with conductor membranous and long, and a large sclerite between conductor and cymbium.

Etymology. The generic name is after Dr. Christa L. Deeleman-Reinhold, and is feminine in gender.

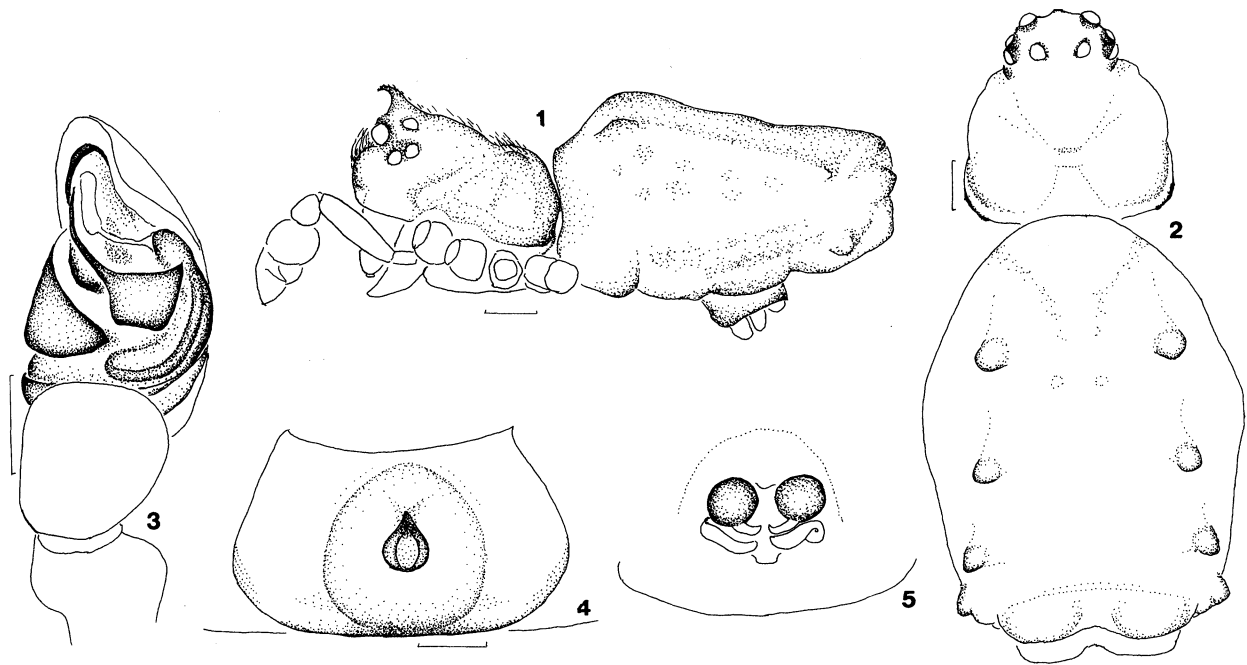
Type species. *Deelemanella borneo* new species.

Deelemanella borneo new species
(Figs. 1–5)

Diagnosis. The present new species is an only member of this genus. The characters of abdomen and male carapace are not seen in the known species of the genus *Argyrodes*.

Description. Carapace oval and convex; both postero-lateral edges bent backwards; a small projection present between AMEs in female; a dorso-anterior large projection present among median eyes in male; male clypeus projecting and truncated, with long hairs near AME (Figs. 1–2). Leg formula 1,4,2,3. Abdomen flat and oblong, with paired dorsal nipple-like projections (Figs. 1–2).

Female genitalia as shown in Figs. 4–5: epigynum swollen semi-globularly, with a median opening; ducts not so long.

Male palpus as shown in Fig. 3: conductor membranous and long, basally thin and distally thick; embolus with large

Figs. 1–5. *Deelemanella borneo* new species, ♀ paratype and ♂ holotype — 1, male, lateral view; 2, female carapace and abdomen, dorsal view; 3, male palpus, ventral view; 4, epigynum, ventral view; 5, female internal genitalia, dorsal view. Scales: 0.2 mm (1–2) and 0.1 mm (3–5).

base, the tip long and pointed; a large sclerite present between conductor and cymbium.

Coloration (Figs. 1–2). Cephalothorax brown. Eyes on dark bases. Abdomen grayish brown with dusky flecks and dorsally with two pairs of brown disks.

Measurements (in mm, ♀ paratype/♂ holotype). Body length 2.76/2.18. Carapace length 0.97/0.92; width 0.84/0.74. Abdomen length 1.92/1.45; width 1.21/0.74; height 1.53/0.92. First leg: femur 1.24/1.13; patella and tibia 1.21/1.21; metatarsus 0.63/0.63; tarsus 0.55/0.55. Second patella and tibia 0.82/0.76; third patella and tibia 0.55/0.47; fourth patella and tibia 0.97/0.79. AME 0.12/0.12; ALE 0.08/0.07; PME 0.08/0.07; PLE 0.08/0.07. AME-AME 0.13/0.13; AME-ALE 0.03/0.03; PME-PME 0.12/0.13; PME-PLE 0.08/0.07. MOA, AW 0.32/0.32; PW 0.24/0.26; L 0.24/0.18.

Variations. Body length, 2.7–3.4 mm in female, 2.2–2.3 mm in male.

Type series. Holotype: ♂, and paratypes: 2♀1♂, N. BORNEO, Mt. Kinabalu N. P., Poring Hot Springs, 6°2′N 116°50′E, primary forest 500–700 m, day-fogging canopy tree 52 *Aporusa* species (Euphorbiaceae), 19-II-1996 to 26-III-1996, leg. A. Floren, ex coll. C. L. Deeleman 2000-704.

Distribution. North Borneo.

Etymology. The specific name is a noun in apposition after Borneo.

Molione Thorell 1892

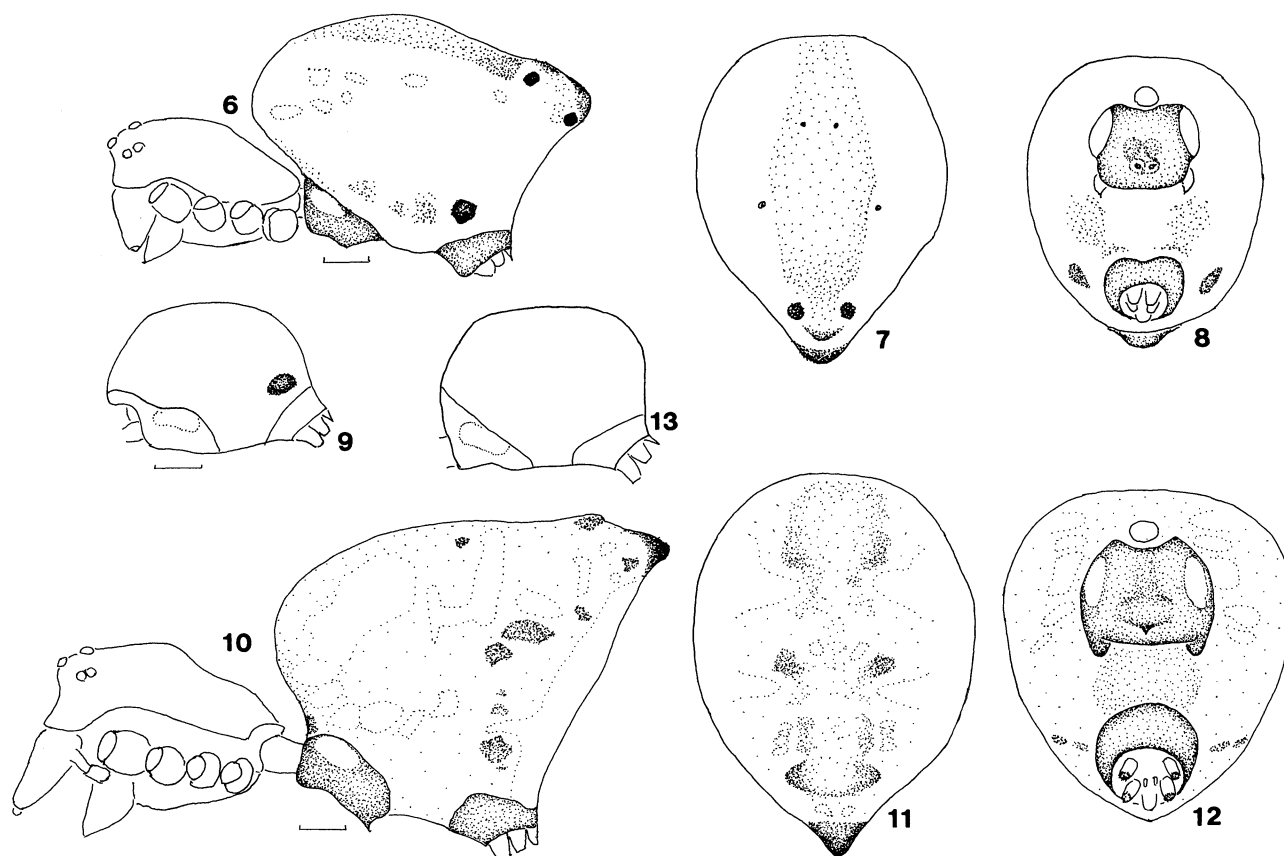
Molione Thorell 1892, p. 216 – Levi & Levi 1962, p. 48; Wunderlich 1994, p. 569.

Note. Three species have been described under this genus. *M. triacantha* Thorell 1892 and *M. trispinosa* (O. Pickard-Cambridge 1873) have three dorsal spine-like projections on abdomen, and *M. uniacantha* Wunderlich 1995 has one dorsal projection. Two new species described in this paper has no dorsal projections. Abdomen with extremely sclerotized epigastric area and a sclerotized ring around spinnerets. Cymbium of male palpus with a hooded paracymbium. This genus belongs to the subfamily Theridiinae.

Though two new species lack dorsal projections on abdomen, extremely sclerotized epigastric area and a sclerotized ring around spinnerets clearly show that they belong to *Molione*.

Type species. Molione triacantha Thorell 1892.

Molione christae new species
(Figs. 6–9, 14–15)

Diagnosis. This new species is easily distinguished from the other three known species of *Molione* by abdomen without dorsal spine-like projections. This species most

Figs. 6–13. *Molione christae* new species (6–9) and *M. kinabalu* new species (10–13), ♀ holotype and ♂ paratype — 6, 10, female, lateral view; 7–8, 11–12, female abdomen, dorsal (7, 11) and ventral (8, 12) view; 9, 13, male abdomen, lateral view. Scales: 0.2 mm.

resembles *M. kinabalu* new species, but is distinguished from the latter by male palpus with long conductor and female internal genitalia with short ducts. Body length of this species (female 1.6–2.2 mm, male 1.5–1.8 mm) is smaller than that of *M. kinabalu* (female 2.3–3.0 mm, male 2.0–2.1 mm). Colorations of both species are also different.

Description. Carapace oval. Leg formula 1,4,2,3. Abdomen oval, posterior end projecting beyond spinnerets in female, not projecting in male; epigastric area, a ring around spinnerets and posterior projection sclerotized in female (Figs. 6–8), epigastric area and anterior part around pedicel forming a large sclerotized plate in male (Fig. 9). Pedicel sclerotized.

Female genitalia as shown in Figs. 8, 14: epigynum with a pair of small depressions, in which two openings situated in them; seminal receptacles globular; ducts short.

Male palpus as shown in Fig. 15: conductor long and membranous.

Coloration (Figs. 6–9). Carapace dusky brown, darker in head region. Chelicerae, maxillae and labium brown. Legs brown; first femora and tibiae with dusky flecks. Abdomen grayish brown with black or dusky flecks and small whitish pigments; sclerotized areas brown; posterior end with two pairs of black points; both lateral sides of spinnerets each with one large black points; dorsum with a median wide dusky fleck.

Measurements (in mm, ♀ holotype/♂ paratype). Body length 2.18/1.84. Carapace length 0.79/0.92; width 0.68/0.61. Abdomen length 1.50/1.00; width 1.13/0.71; height 1.13/0.97. First leg: femur 1.05/1.16; patella and tibia 1.05/1.11; metatarsus 0.63/0.79; tarsus 0.32/0.37. Second patella and tibia 0.71/0.82; third patella and tibia 0.53/0.61; fourth patella and tibia 0.87/0.92. AME 0.07/0.08; ALE 0.07/0.07; PME 0.07/0.08; PLE 0.05/0.07. AME-AME 0.07/0.07; AME-ALE 0.03/0.02; PME-PME 0.05/0.03; PME-PLE 0.05/0.07. MOA, AW 0.18/0.21; PW 0.18/0.18; L 0.13/0.13.

Variations. Body length, 1.6–2.2 mm in female, 1.5–1.8 mm in male.

Note. This species is seen only in the primary forest of fogging canopy *Aporusa* species (Euphorbiaceae), (Deeleman-Reinhold in personal communication).

Type series. Holotype: ♀, and paratypes: 2♀2♂, 1♀ juvenile, N. BORNEO, Mt. Kinabalu N. P., Poring Hot Springs, 6°2′N 116°50′E, primary forest 500–700 m, fogging canopy *Aporusa* species (Euphorbiaceae), 19-II-1996 to 26-III-1996, leg. A. Floren, ex coll. C. L. Deeleman 2000-704.

Distribution. North Borneo.

Etymology. The specific name is after Dr. Christa L. Deeleman-Reinhold.

Molione kinabalu new species
(Figs. 10–13, 16–19)

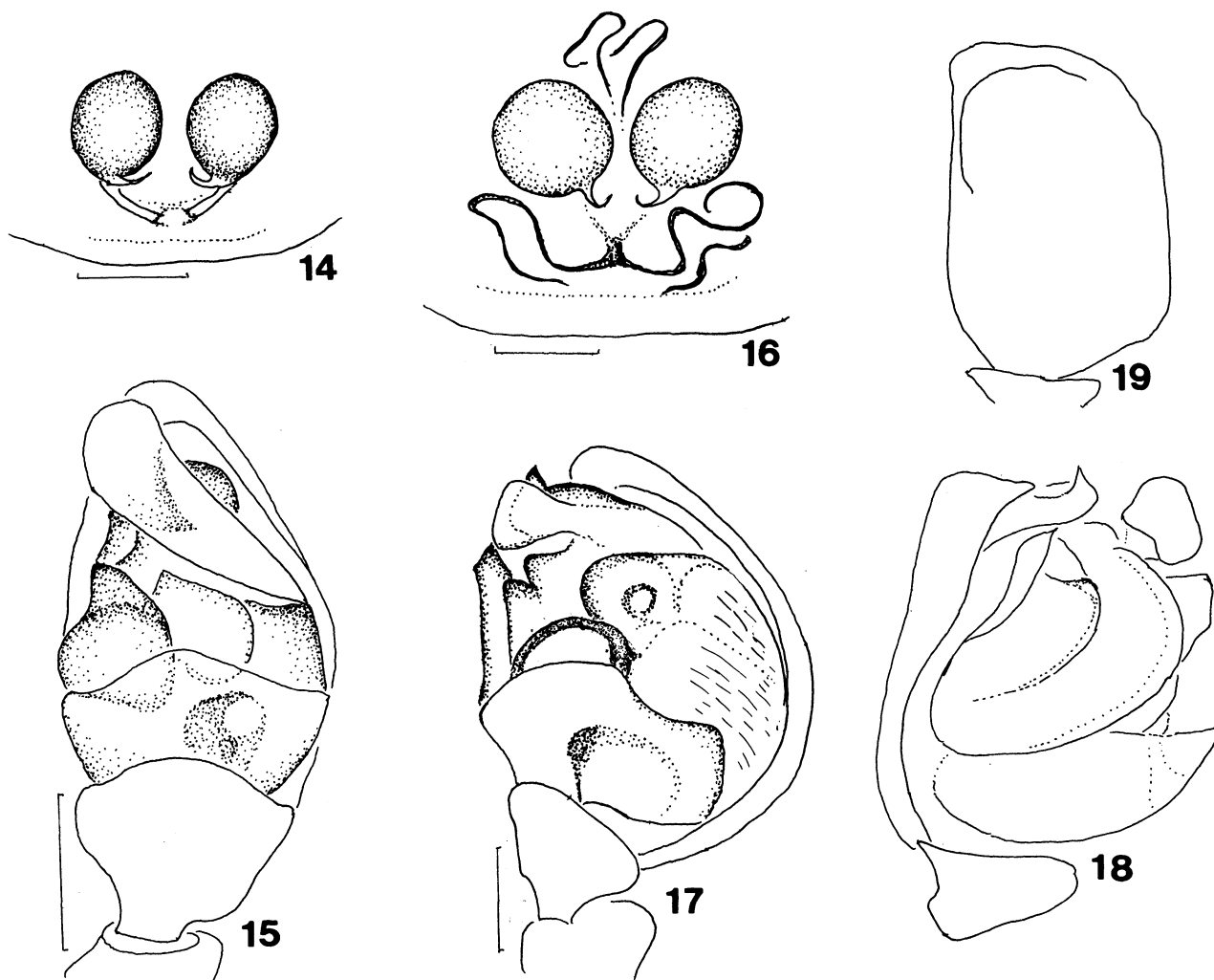
Diagnosis. This species is easily distinguished from the other known species of *Molione* by the abdomen without dorsal projections. This species resembles *M. christae* new species. The discriminating characters are given under the diagnosis of *M. christae*.

Description. Overall external characteristics are similar to those of *M. christae* new species (Figs. 10–13). Female genitalia as shown in Figs. 12 and 16: epigynum with a small scapus, below which openings situated; seminal receptacles globular; ducts thin and long. Male palpus as shown in Figs. 17–19: embolus thick, the tip distally pointed; conductor membranous, the tip rounded; cymbium with hooded paracymbium.

Coloration (Figs. 10–13). Cephalothorax dark brown. Abdomen grayish brown with large white pigments and black flecks; sclerotized areas brown.

Measurements (in mm, ♀ holotype/♂ paratype). Body length 2.95/2.08. Carapace length 1.24/1.00; width 0.74/0.71. Abdomen length 1.71/0.95; width 1.29/0.82; height 1.58/0.82. First leg: femur 1.03/0.97; patella and tibia 0.97/1.00; metatarsus 0.55/0.66; tarsus 0.34/0.37. Second patella and tibia 0.74/0.74; third patella and tibia 0.61/0.58; fourth patella and tibia 0.84/0.82. AME 0.09/0.09; ALE 0.07/0.08; PME 0.07/0.08; PLE 0.07/0.05. AME-AME 0.08/0.07; AME-ALE 0.03/0.03; PME-PME 0.07/0.05; PME-PLE 0.09/0.09. MOA, AW 0.24/0.24; PW 0.21/0.17; L 0.14/0.16.

Variations. Body length, 2.3–3.0 mm in female, 2.0–2.1 mm in male.

Note. This species is seen in 40 years old secondary forest of fogging canopy *Vinex pinnata* (Verbenaceae) (Deeleman-Reinhold in personal communication).

Figs. 14–19. *Molione christae* new species (14–15) and *M. kinabalu* new species (16–19), ♀ holotype and ♂ paratype — 14, 16, female internal genitalia, dorsal view; 15, 17–18, male left palpus, ventral (15), retrolateral (17) and prolateral (18, expanded) view; 19, cymbium of male left palpus, ventral view (bulb excluded). Scales: 0.1 mm.

Type series. Holotype: ♀, and paratypes: 5♀3♂, N. BORNEO, Mt. Kinabalu N. P., Poring Hot Springs, 6°5′N 116°50′E, 40 years old secondary forest 500–700 m, fogging canopy *Vinex pinnata* (Verbenaceae), 5 to 14-III-1997, leg. A. Floren, ex coll. C. L. Deeleman 2000–704.

Distribution. North Borneo.

Etymology. The specific name is a noun in apposition after Mt. Kinabalu.

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Acta Arachnologica Vol. 52, No. 2 掲載論文の和文要旨

キクヅキコモリグモから出現した糸片虫科線虫（pp. 77–78）

飯田博之[1]・長谷川英男[2]（[1]〒606-8502 京都市左京区北白川追分町　京都大学大学院農学研究科昆虫生態学研究室；[2]〒879-5593 大分県大分郡挾間町医大ヶ丘1丁目1番地 大分医科大学感染分子病態制御研究室）

京都市内の水田で採集したキクヅキコモリグモ *Pardosa pseudoannulata* を飼育していたところ，12頭のクモから計22頭の糸片虫科線虫が出てきた．宿主は全て雌成体だった．ほとんどの場合，1頭のクモに寄生していた線虫は1頭だった．しかし，1頭のクモに2頭および10頭の線虫が寄生していた場合もそれぞれ1例ずつあった．また12頭の宿主のうち，線虫が出た後も生きていた個体は2頭だった．線虫の体長は14～159 mm であった．Poinar（1977, 1979, 1986）に基づき線虫の同定を試みたところ，その形態的特徴から *Mermis, Octomermis, Orthomermis, Allomermis, Pheromermis, Eumermis, Phreatomermis, Hydromermis, Quadrimermis, Aranimermis* 属ではないことは判明したが，幼体であったのでこれ以上同定することはできなかった．寄生率については，採集個体のおおよその数から判断すると，1～10%の範囲内であると推測できた．世界では40種以上のクモ類から糸片虫科線虫が見つかっているが，キクヅキコモリグモからの報告例はまだない．糸片線虫科の線虫は幼体のステージで寄生している（Hyman 1951）．したがって，宿主から出た直後はまだ幼体であるため種の同定はできない．今後，線虫の種を同定するためには，Poinar（1986）のように宿主から出た線虫を成虫にまで育てる必要があるだろう．

***Oxyptila atomaria*（クモ目，カニグモ科）の日本からの発見**（pp. 79–81）

小野展嗣[1]・松田まゆみ[2]（[1]〒169-0073 東京都新宿区百人町3-23-1　国立科学博物館動物研究部内；[2]〒080-1403 北海道河東郡上士幌町糠平北区25）

土壌性のカニグモ科の1種 *Oxyptila atomaria*（Panzer 1801）（アトムオチバカニグモ―新称―）を，北海道において主にピットホールトラップを用いて採集された標本に基づいて日本から初めて記録し，両性の生殖器を図示した．本種はヨーロッパから，シベリア，韓国，日本とユーラシア大陸北部に広く分布するが，同大陸東部では比較的稀であると思われる．

北海道産のカイゾクコモリグモ属（クモ目：コモリグモ科）の1新種（pp. 83–84）

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北海道天塩郡サロベツ原野，苫小牧市弁天沼やウトナイ湖等の湿原より得られたコモリグモ科カイゾクコモリグモ属の1新種を *Pirata hokkaidensis* ミズベコモリグモ（新称）と命名して記載した．本種は中国に分布する，*Pirata serrulatus* Song & Wang 1984 に近似するが，雄触肢中部把持器基部の突起がないことによって区別できる．

北ボルネオ産ヒメグモ科（クモ綱：クモ目）の1新属および3新種（pp. 85–89）

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北ボルネオから1新属 *Deelemanella* および3新種 *D. borneo, Molione christae, M. kinabalu* を記載した．*Deelemanella*（イソウロウグモ亜科）は雄の背甲の頭部に1つの突起があり，腹部が扁平で背面に数対の突起があることにより他の属から区別できる．*Molione*（ヒメグモ亜科）はこれまで腹部背面に刺状の突起がある3種が知られているが，本稿で記載した2種は腹部背面に突起がない．

アジア産トゲオオザトウムシ亜科数種の正体とシノニム（ザトウムシ目，マザトウムシ科）（pp. 91–102）

Wojciech Staręga（Instytut Biologii Akademii Podlaskiej, Poland）

多数のタイプ標本と原記載にもとづきトゲオオザトウムシ亜科（Opilioninae）の分類学的改訂をおこなった．いくつかの転属と多数のシノニムが含まれる．本亜科は次の属からなる：*Bidentolophus, Egaenus, Himalphalangium, Homolophus, Opilio, Scleropilio*．ほとんどの属と種は中央アジアと東アジアに分布し，アジア西部とヨーロッパには数種が到達しているのみである．次の種については転属をおこなった：*Egaenus pakistanus*（Roewer), *Himalphalangium spinulatum*（Roewer）（＝ゴホントゲザトウムシ), *Homolophus serrulatus*（Karsch), *Bidentolophus adungius*（Roewer), *Homolophus consputus*（Simon), *H. nigridorsus*（Caporiacco), *H. turcicus*（Roewer）（最後の3種はやや不明確), *H. martensi*（Staręga）（以上，転属後の学名)．新しくシノニムとなったのは次のとおり（等号の前が新参シノニム)：*Egaenus carpaticus* Avram = *E. convexus*（C. L. Koch), *Euphalangium afganum* Roewer と *E. chitralense* Roewer = *Egaenus kashmiricus* Caporiacco, *Opilio nigerrimus* Schenkel = *Himalphalangium spinulatum*（Roewer)（ゴホントゲザトウムシ), *Phalangium tricolor* Kulczyński（サンショクザトウムシ), *P. bidentatum* Kulczyński, *Opilio Kishidai* Saitô（キシダザトウムシ), *O. quadridentatus* Wang, *Opilio tricolor* var. *modestus* Schenkel = *Homolophus serrulatus*（Karsch), *Opilio hexa-spinulatus* Saitô と *Oliio koreaus* Charitonov = *Bidentolophus bidens*（Simon), *Opilio birmanicus* Roewer = *Bidentolophus adungius*（Roewer), *Opilio sunuitensis* Nakatsudi（ソニツトザトウムシ）と *Opilio nipponensis* Roewer = *Homolophus arcticus* Banks（ウデブトザトウムシ), *Euphalangium trinkleri* Roewer と *Opilio insolitus* Roewer = *Homolophus tibetanus*（Roewer)．*Phalangium coronatum* Redikorzev, と *Opilio redikorzevi* Roewer = *Opilio lederi* Roewer, *Opilio turcicus* Roewer = *Opilio saxatilis* C. L. Koch, *Opilio reginae*